About SOS Explorer

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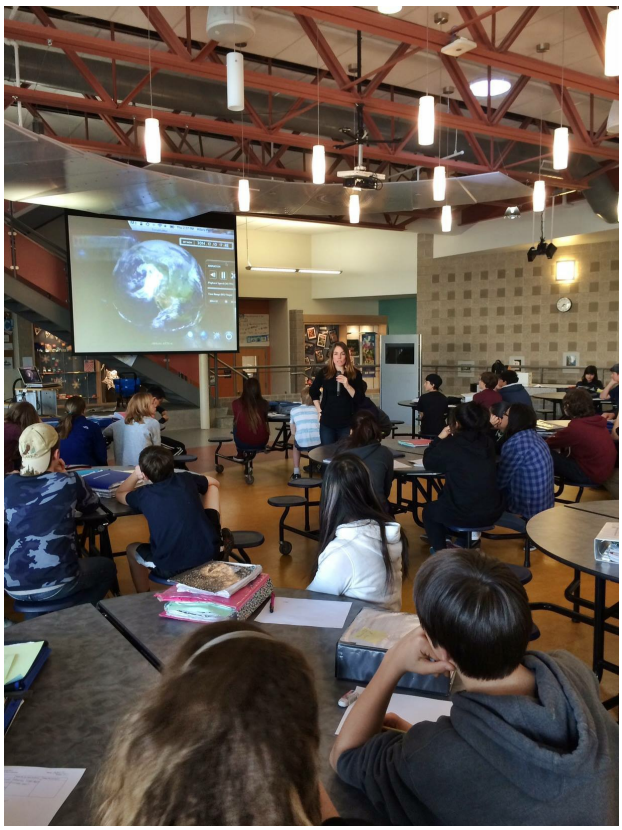
What is SOS Explorer?

SOS Explorer™ (SOSx) is a flat screen version of the widely popular Science On a Sphere® (SOS). The revolutionary software takes SOS datasets, usually only seen on a 6-foot sphere in large museum spaces, and makes them more accessible. Animated images such as atmospheric storms, climate change, and ocean temperature can be shown in SOSx, which explains sometimes complex environmental processes in a way that is simultaneously intuitive and captivating.

NOAA uses SOSx as an instrument to highlight and disseminate cutting edge science to the world through visualizations that show information provided by satellites, ground observations and computer models.



Hilary Peddicord uses SOSx in the single screen mode at Casey Middle School in Boulder, CO

Features Include:

- Easy to use interface for maximum interactivity
- Over 115 datasets, including real-time datasets with descriptions
- Educational videos linked to specific datasets for deeper inquiry
- Tours that create a narrative through the datasets and help users make connections
- Analysis tools to easily measure, probe, and plot data from the visualizations
- Immersive, first person experiences: walk on the Moon or pilot a submarine
- Stunning graphics in beautiful 4k resolution
- Dual screen or single screen configuration options
- SOSx Tour Builder that allows for the addition of new datasets and the creation of tours

Dual Screen - Ideal for Exhibits

In the dual screen set-up, the interactive visualizations are displayed on the touchscreen and also mirrored on the large display for others to view. Colorbars, labels, and text boxes are shown on the large screen only, while the search window and other user interfaces show up only on the touchscreen. The result is an exhibit that can be controlled by one person and enjoyed by many. The equipment list includes everything required for this exhibit set-up.

Single Screen - Great for Classrooms

In the single screen set-up, everything fits on just one screen and the user can either use a keyboard and mouse or a touchscreen to control the software. In a classroom, the single screen can be displayed on a large television or projector for the whole class to see, making it the ideal teaching tool. The equipment for the single screen set-up varies based on your desired use. The equipment list includes everything required for the classroom set-up.

SOSx Tour Builder

SOS Explorer comes with the SOSx Tour Builder that allows for the addition of new content and the creation of custom tours. Tours allow you to tell a story with datasets and help users make tangible and understandable connections between the animations and their lives. Tours are scripted presentations that walk a user through the datasets using a storyline and a learning goal. These can include text, guiding

questions, pop-up web content, videos, pictures/diagrams, and click-able place marks. The system comes with several tours crafted by NOAA and with the SOSx Tour Builder, you can create as many new tours as you like!

SOS Explorer, described above, is an exhibit-quality version and SOS Explorer Lite, described below, is a free introductory version.

What is SOS Explorer Lite?

SOS Explorer™ Lite (SOSx Lite) is an introductory version of SOSx - now freely available for download - that allows users to explore a select group of SOS datasets and walk through three pre-programmed educational tours on a personal computer display or projector screen.

SOSx Lite allows everyone, including teachers and their students, to interact with cutting-edge technology and scientific data visualizations with almost any Mac OS X or Windows computer. Check our system requirements to see if your computer can accommodate SOSx Lite.

Tools included in the application allow users to zoom into, probe, and graph the data, as well as add supplementary material including websites, videos, pictures, and placemarks. In order to make the product more accessible for teachers, lesson plans and pre-programmed tours through standards-relevant topics are available here.

What is different between SOS Explorer and SOS Explorer Lite?

In addition to the tools and capabilities of the SOSx Lite, the exhibit version of the software comes with over 115 Science On a Sphere® datasets including real-time datasets, is programmed to operate via touch screen kiosk with a 4K display, and is intended for commercial use.

	SOS Explorer Lite	SOS Explorer
What do I need?	Almost any Windows or OS X computer	Windows PC, Hi-Res Monitor, Touchscreen (Dual set up only)
What data is available?	16 included	~ 115 including real-time
Can I choose the datasets?	No	Yes
Is it free?	Yes	No, contact us
Can I use it in my museum?	No	Yes
Can I use it in my school?	Yes	Yes

Check out this document to find out more about SOS Explorer and SOS Explorer Lite capabilities and features.

History

SOS Explorer™ was developed by the Exploratory Visualization and Outreach (EVO) section of NOAA's Global Systems Division, which is also the home of Science On a Sphere® (SOS, learn more here). Wanting to build off of the success of SOS and expand the reach of SOS into classrooms and homes as well as museums who don't have the physical space for a full Science On a Sphere®, developers created a flat screen version of SOS called SOS Explorer™ (SOSx).

Several factors came together at the right time to lead to the development of SOSx. After field trips to see NOAA's popular SOS, many teachers often asked how they could bring the same experience of viewing global data into their classrooms. Most of the teachers didn't have a budget for installing SOS into their schools and needed other options. A flat screen version that could be displayed on computer monitors and projectors seemed like an obvious solution. At the same time, EVO developers were working on Terraviz,™ a visualization engine that utilizes gaming technology to generate high resolution displays. As part of their work, they were using Terraviz to create a virtual globe that scientists could use to display and analyze global weather models. As the technology matured, it became clear that Terraviz could be used for both scientists and teachers. Two different products emerged - the NOAA Earth Information System (NEIS, learn more at http://esrl.noaa.gov/neis/) was developed for scientific use and SOS Explorer was developed for educational and public use.